CLAIMS:

1. A wireless network comprising a radio network controller (1) and a plurality of assigned terminals (2 to 9) for exchanging useful data and control data, which terminals respectively have a buffer for buffering data packets to be transmitted to the radio network controller (1) via a contention channel and a measuring device for measuring the occupancy level of at least one buffer,
characterized
in that a terminal (2 to 9), when an occupancy level of a buffer or various buffers is exceeded, is provided for sending a signaling sequence at a start time predefined by the radio network controller (1),
in that the radio network controller (1) includes a device for correlating a signaling sequence sent by a terminal (2 to 9) and for detecting the pulse developed from a received and correlated signaling sequence and
in that the radio network controller (1), after detecting a signaling sequence assigned to a terminal (2 to 9), is arranged for sending an indication to the terminal (2 to 9) to further transmit the data packets over a channel assigned only to the terminal.

2. A wireless network as claimed in claim 1,
characterized
in that the channel assigned to a terminal (2 to 9) is a dedicated channel.

3. A wireless network as claimed in claim 1,
characterized
in that a terminal (2 to 9) is provided for measuring the occupancy level of the buffer or of various buffers in the layer for the radio link control (RLC layer).

4. A wireless network as claimed in claim 1,
characterized
in that the radio network controller (1) includes a matched filter generating at least one pulse after a signaling sequence has been received and includes a peak detector and

in that the peak detector, in a certain detection window whose start time and duration are determined by the channel properties and the start time of a signaling sequence to be detected, is provided for detecting the peak on the output of the matched filter

5. A wireless network as claimed in claim 1, characterized in that a terminal (2 to 9) is provided for sending a Gold, Kamasi or Golay sequence as a signaling sequence at a certain start time.

6. A wireless network as claimed in claim 1, characterized in that a terminal (2 to 9) is provided for sending a signaling sequence at a start time predefined by the radio network controller (1) when a sum of the occupancy levels of all the buffers exceeds a predefined threshold.

7. A wireless network as claimed in claim 1, characterized in that a terminal (2 to 9) is provided for transmitting further information about the traffic load of the terminal (2 to 9) over this user channel after receipt of the indication and change-over to the assigned channel.

8. A radio network controller (1) in a wireless network for exchanging useful data and control data comprising a plurality of assigned terminals (2 to 9), characterized in that the radio network controller (1) includes a device for correlating a signaling sequence transmitted by a terminal (2 to 9) and for detecting the peak evolved from a received and correlated signaling sequence, in that a signaling sequence transmitted at a certain time by a terminal (2 to 9) indicates that the occupancy level of the buffer or of various buffers in the respective terminal (2 to 9) has been exceeded and in that the radio network controller (1), after detecting a signaling sequence assigned to a terminal (2 to 9), is provided for sending an indication to the terminal (2 to 9) for the further transmission of the data packets over a channel exclusively assigned to the terminal (2 to 9).

9. A terminal (2 to 9) in a wireless network for exchanging useful data and control data with at least one radio network controller (1) and further terminals, which terminal includes at least one buffer for buffering data packets to be transmitted to the radio network controller (1) over a contention channel and a measuring device for measuring the occupancy level of at least one buffer,
characterized
in that the terminal (2 to 9), when an occupancy level of a buffer or various buffers is exceeded, is provided for sending a signaling sequence at a start time predefined by the radio network controller (1) and
in that the terminal (2 to 9) is provided for receiving an indication from the radio network controller (1) which detects the signaling sequence that a channel exclusively assigned to the terminal (2 to 9) can be used for the further transmission of the data packets.

10. A method of exchanging useful data and control data in a wireless network with a radio network controller (1) and a plurality of assigned terminals (2 to 9) which respectively have at least one buffer for buffering data packets to be transmitted to the radio network controller (1) over a contention channel and a measuring device for measuring the occupancy level of at least one buffer,
characterized
in that a signaling sequence is transmitted by a terminal (2 to 9) at a start time respectively predefined by the radio network controller (1) after an occupancy level of one or more buffers is exceeded,
in that a signaling sequence transmitted and received by a terminal (2 to 9) is correlated in the radio network controller (1) and the ensuing peak is detected and
in that an indication for the terminal (2 to 9) to use a channel exclusively assigned to the terminal (2 to 9) for the further transmission of the data packets is transmitted by the radio network controller (1) after the detection of a signaling sequence assigned to a terminal (2 to 9).